Zero Waste—You Make It Happen!

Rebuilding Green

Why Rebuild Green?

Using green building techniques to rebuild your home will reduce its impact on the environment and may lower your monthly utility costs. It will also result in a healthier and more comfortable living environment.

Green building, sometimes called sustainable building, is a whole-building approach to design and construction incorporating methods that save or reduce resources in five categories: site, water, energy, materials, and indoor environmental quality.

The following list is not comprehensive, but presents some of the easiest and least costly approaches, many of which offer long-term money savings.

Site

Depending on the degree of your rebuild and your site, some of these approaches may not be applicable.

- **Orientation**: Orient the house on an east-west axis to reduce solar heat gain in summer and to take advantage of passive solar heating in winter.
- **Footprint**: Consider building multi-story rather than single story to have more open space outdoors.

Water

Consider using strategies that reduce water consumption.

- **Fixtures:** Install low-flow fixtures that exceed code requirements.
- **Landscape**: Plan appropriate landscape to reduce water consumption, reduce biomass, and use drip irrigation when possible.

Energy

Implementing energy-saving strategies can provide the greatest cost savings by reducing your monthly utility bills.

- **Windows**: Install energy-efficient windows. These are generally double-paned and use "low-e" glazing.
- **Insulation**: Install recycled-content cellulose insulation with a higher "R" value than code requires. Use formaldehyde-free insulation.
- **HVAC**: Choose an HVAC system rated SEER 12 or higher.
- **Roofing**: Choose a cool-roof rated, fire-resistant roofing material. Consider a radiant barrier to reduce heat build-up through the roof, thus reducing cooling requirements.
- **Appliances**: Install appliances that are energy- and water-efficient and are certified under the Energy Star program.

Materials

Select products that reduce the demand for virgin raw materials and that have a reduced impact on the environment.

- **Construction Waste Management**: Recycle at least 50 percent of the waste from your project. Typically wood, cardboard, and concrete are the easiest to recycle.
- **Recycled Content Materials**: Use recycled content materials when possible, for example some carpet, paint, and tile are made with recycled material.
- **Durable materials**: Choose materials that are designed to last. More durable materials require less replacement and can save money in the long run.
- **Lumber**: Use engineered trusses or finger-jointed lumber and molding, since these

reduce the need for new clear lumber. Use certified wood, which comes from forests that are managed in an environmentally preferable manner.

- **Rapidly Renewable Materials**: As an alternative to hardwood flooring, consider cork and bamboo. These regenerate faster than their wood counterparts.

Indoor Environment

Avoid materials that give off undesirable chemicals. When selecting materials for your project, consider alternatives that do not emit hazardous or toxic chemicals, such as volatile organic compounds (VOC), and have no added formaldehyde. Provide ventilation to assure a good supply of fresh air.

- **Medium Density Fiberboard** (MDF): Choose MDF products made with no added formaldehyde.
- **Paint**: Use paint that contains little or no VOCs.
- **Adhesives**: Use adhesives that are solvent free (non-VOC emitting).

Hire Experience

Hire an architect and building contractor who has experience with building green. This will help assure a successful project.

More Information

To look deeper into green building and explore the possibilities, check out some of the following resources. For more detailed information, please contact the Sustainable Building Program at the California Integrated Waste Management Board (CIWMB) at (916) 341-6489

CIWMB Web Resources

Sustainable Building
For general as well as specific green building information and links to other resources: www.ciwmb.ca.gov/GreenBuilding/.

CalMAX
The California Materials Exchange (CalMAX) is an electronic listing of available and wanted materials that are typically considered waste. CalMAX is a great place to find a bargain.
www.ciwmb.ca.gov/CalMax/

Recycled Content Product (RCP) Database
A searchable database for locating RCPs.
www.ciwmb.ca.gov/RCP/

Waste Streams Profile: Jurisdictions
A searchable database to identify your recycling coordinator and other local contacts.
www.ciwmb.ca.gov/Profiles/Juris/

Waste Management Disaster Plan
www.ciwmb.ca.gov/Disaster/DisasterPlan/

Other Resources

Build It Green-GreenPoint Rated Homes
These California centered guidelines offer comprehensive and cost-effective green building methods and are available for download.
www.builditgreen.org

LEED for Homes
The U.S. Green Building Council's comprehensive green building rating system targeting the top 25% of the market.
www.usgbc.org/DisplayPage.aspx?CMSPageID=147

California Green Builder
A builder-developed program that is designed to be cost effective for production builders.
www.cagreenbuilder.org

Energy Star
A joint project from the U.S. Environmental Protection Agency and the Department of Energy, this Web site has searchable databases for appliances, roofing material, and other products, as well as information on residential programs.
www.energystar.gov

Wildland Building Standards
CAL FIRE has adopted new building code addressing structures in Wildland areas.
www.fire.ca.gov/wildland.php

Publication # 433-03-024 Updated July 2007